



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,345	11/20/2001	Paul L. Sinclair	9815	1754

26890 7590 12/22/2004

JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ4
DAYTON, OH 45479

EXAMINER

KHATRI, ANIL

ART UNIT PAPER NUMBER

2124

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,345

Applicant(s)

SINCLAIR, PAUL L.

Examiner

Anil Khatri

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on: _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-50 are rejected under 35 U.S.C. 101 because they disclose a claimed invention that is an “abstract idea and not technologically embodied” as defined in the case *In re Warmerdam*, 33, F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994).

Analysis: Regarding claims 1-49 found to be in the technological art since the invention is to be practiced by using computer. Each of the claims is disclosed by the applicant as being processing and manipulating data. Since the claims are each a series of step to be performed on a computer the process must be analyzed to determine whether claims are statutory under 35 USC 101.

Examiner believes that the claims are non statutory because they are not technological embodied. Claims 1-40 involves no more than a manipulation of an abstract idea and therefore is nonstatutory under 35 USC 101, therefore, claims 1-50 are rejected under 35 USC 101.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

Art Unit: 2124

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-50 are rejected under 35 U.S.C. 102(e) as being anticipated by *Liu* USPN 6,185,557.

Regarding claims 1, 18 and 34

Liu teaches,

- loading a subset of the rows of T1 into memory, where the subset is consecutive and includes the first row of T1 (column 2, lines 37-54, “a common sort... the first table”);
- loading the first row of T2 into memory (column 2, lines 37-54, “a common sort... the first table”);;
- comparing the loaded row of T2 to the loaded rows of T1 (column 2, lines 19, “an “equijoin” operation...”);
- outputting a match, if any (column 2, lines 49, “when there is no longer match...”);
- recording a lack of a match, if any (figures 1-4);
- loading a next consecutive row of T2 into memory (figure 2, items 209-241);

Art Unit: 2124

- repeating steps c through f (figure 2, items 209-241);;
- loading new rows of T1 into memory where the new rows are consecutive and are consecutive with the previously loaded rows of T1 (column 2, lines 6-18, “ rows from multiple table...”);and;
- repeating steps c through h (figure 2, items 209-241); .

Regarding claims 2, 19 and 35

Liu teaches,

- discarding rows of T1 from memory, where the discarded rows are consecutive and include the first row that is in memory and wherein step i comprises repeating steps c through h and h' (column 3, lines 55-58, “if a match... are discarded”).

Regarding claims 3, 4, 17, 20, 21, 33, 36 , 37 and 50

Liu teaches,

- the join command specifies one or more conditions on rows of T1 and discarded rows of T1 are stored if they meet the conditions (column 4, lines 25-43, “the combination... parallel processing”).

Regarding claims 5, 6, 13, 14, 22, 23, 29, 30, 38, 39, 46 and 47

Liu teaches,

- step h occurs after step c finds no match when a predetermined number of matches have been already occurred (column 5, lines 40-50, “ selection criteria and ... data page”).

Regarding claims 7, 15, 24, 31, 40 and 48

Liu teaches,

Art Unit: 2124

- halting the repetition of steps a-h when a predetermined number of comparisons do not result in a match (column 8, lines 56-65, “data page has.. hold the page”);
- sorting rows of T1 and T2 by their join columns, respectively (column 10, lines 23-29, “outer table is sorted... to the user”); and
- merge joining the sorted rows of T1 and T2 (column 10, lines 41, “ the merge join...”).

Regarding claims 8, 25 and 41

Liu teaches,

- wherein T1 and T2 are ordered by a date value (column 12, lines 14, “the join column value...”).

Regarding claims 9-11, 26-28 and 42-45

Liu teaches,

wherein T1 and T2 each have one or more primary index columns and the join command specifies equality of the primary index columns as a condition of the join (column 3, lines 59-67, “operates in conjunction with primary index...”).

Regarding claims 16, 32 and 49

Liu teaches,

- the rows T1 and T2 are sorted by a hash of their join columns (column 6, line 10, “hash join process...”).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil Khatri, primary Examiner whose telephone number is 571-272-3725. The examiner can normally be reached on M-F 8:30-5:00 PM.

Art Unit: 2124

The fax phone number for the organization where this application or proceeding is assigned is 571-273-3725.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANIL KHATRI
PRIMARY EXAMINER